Claims

1. Method for the preparation of an additive for providing controllable degradation thermoplastics of very light colours, which do not degrade too rapid to allow conventional methods for their processing, like film blowing, extrusion, and injection moulding, **characterized in** that a metal salt at its highest stable oxidation state is reacted with a $C_8 - C_{24}$ fatty acid or a $C_8 - C_{24}$ fatty acid derivative under formation of a fat-soluble metal compound and at least one volatile reaction product in a process in which a convenient oxidizing agent ensures that all of the metal in the end product remains in its highest oxidation state.

2. Method as claimed in claim 1, **characterized in** that said oxidizing agent comprises hydrogen peroxide and e.g. consists of a 0.1-5 % hydrogen aqueous peroxide solution.

3. Method as claimed in claim 1, **characterized in** that said oxidizing agent comprises organic peroxides and hydro peroxides.

4. Method as claimed in claim 1, **characterized in** that said oxidizing agent comprises air or oxygen enriched air.

5. Method as claimed in one of the claims 1-4, **characterized in** that said metal salt is a chloride.

6. Method as claimed in one of the claims 1-5, **characterized in** that said $C_8 - C_{24}$ fatty acid or a $C_8 - C_{24}$ fatty acid derivative is added in a stoichiometric excess, e.g. a 20% excess, in relation to the metal salt.

7. Method as claimed in one of the claims 1-2 or 5-6, **characterized in** that the fat soluble metal compound is washed with an aqueous solution of hydrogen peroxide to remove any remains of unreacted metal salt, dispersed in an aqueous diluted solution of the hydrogen peroxide at 35-55 °C for 1 to 3 hours, washed with water and dried in a convection oven.

8. Method as claimed in one of the claims 1-7, **characterized in** that said $C_8 - C_{24}$ fatty acid or a $C_8 - C_{24}$ fatty acid derivative is stearic acid.

9. Method as claimed in any one of the preceding claims, **characterized in** that it also includes the addition of some wax to bind the product to solid lumps that does not release dust.

10. Method as claimed in any one of the preceding claims, **characterized in** that the volatile reaction products and/ or reactants are eliminated by azeotropic distillation.

11. Method as claimed in any one of the preceding claims, **characterized in** that the metal salt is an iron salt of which the highest oxidation state is 3.

12. Additive for controlling the degradation time of products like thermoplastics, oil and the like, **characterized in** that the additive is prepared as defined by any one of the claims 1-11.

13. Additive as claimed in claim 12, **characterized in** that it is included as one of several elements of a master batch being tailored for a particular application.

14. Use of additive as claimed in claim 12 or claim 13 in thermoplastics in combination with at least one per se known additive chosen among antioxidants, radical scavengers, UV absorbers, amines, peroxides, and/ or peroxide forming substances for thermoplastics or blends thereof.

15. Use as claimed in claim 12, said thermoplastic being polyethylene, polypropylene or any combination of polyethylene and polypropylene.

16. Use as claimed in claim 14 or claim 15, the type and amount of said per se known additive or additives being chosen and adapted respectively so that the desired degradation time is achieved for the actual thermoplastic material or blend of thermoplastic materials.

17. Use as claimed in any one of claims 14-16, where said per se known additive is chosen among Sanduvor PR25, Chimassorb 81, Cyasorb UV 5911, Tinuvin 326, and Tinuvin 1577.

18. Use as claimed in any one of claims 14-17, where said per se known additives are present in a relative amount of from 0.03 to 10 % by weight of the thermoplastic material or the blend of thermoplastic materials, preferably from 0.05 to 0.5 %.

19. Method for the manufacture of a very light-coloured thermoplastic material which may be film blown, extruded and/ or injection moulded and which yet is degradable in less than one year under influence of light, **characterized in** that an additive as claimed in claim 9 is added to the thermoplastic in an amount of at least 0.03 % by weight of the thermoplastic material, in combination with a per se known antioxidant.

20. Method as claimed in claim 19, **characterized in** that the amount of additive is adapted to the chosen type of and amount of antioxidant in order to control the processibility of the manufactured thermoplastic as well as its degradation time under influence of light.

21. Method as claimed in claims 19-20, **characterized in** that additive is ferric(III) stearate and that it is being added in an amount of at least 0.1 % by weight of the thermoplastic material.

22. Method as claimed in claim 21, **characterized in** that a 0.5 % by weight solution of ferric(III)stearate in an aliphatic hydrocarbon, e.g. poly(1-deken), has a Gardner Colour Number according to ASTM 1544, that is 4 or less than 4.

23. Method as claimed in any one of claims 19-22, **characterized in** that said antioxidant is chosen among so-called process stabilizers, like phosphites, thio synergists, CH-acid radical scavengers, and phenolic antioxidants.

24. Method as claimed in any one of claims 19-23, **characterized in** that the manufacture comprises compounding in an extruder or the like.

25. Very light-coloured thermoplastic material that may be film blown, extruded and/ or injection moulded and which yet will degrade in less than one year under influence of light, **characterized in** that it is manufactured according to one of claims 19-21 (should be 19-24).